

TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

INSTRUMENT APPROACH PROCEDURE CHARTS

IFR TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

Civil Airports and Selected Military Airports

ALL USERS: Airports that have Departure Procedures (DPs) designed specifically to assist pilots in avoiding obstacles during the climb to the minimum enroute altitude, and/or airports that have civil IFR take-off minimums other than standard, are listed below. Take-off Minimums and Departure Procedures apply to all runways unless otherwise specified. Altitudes, unless otherwise indicated, are minimum altitudes in MSL.

DPs specifically designed for obstacle avoidance are described below in text, or published separately as a graphic procedure. If the (Obstacle) DP is published as a graphic procedure, its name will be listed below, and it can be found in either this volume (civil), or a separate Departure Procedure volume (military), as appropriate. Users will recognize graphic obstacle DPs by the term "(OBSTACLE)" included in the procedure title; e.g., TETON TWO (OBSTACLE). If not assigned another DP or radar vector by ATC, this procedure may be flown to ensure obstacle clearance.

Graphic DPs designed by ATC to standardize traffic flows, ensure aircraft separation and enhance capacity are referred to as "Standard Instrument Departures (SIDs)". SIDs also provide obstacle clearance and are published under the appropriate airport section. ATC clearance must be received prior to flying a SID.

CIVIL USERS NOTE: FAR 91 prescribes standard take-off rules and establishes take-off minimums for certain operators as follows: (1) Aircraft having two engines or less - one statute mile. (2) Aircraft having more than two engines - one-half statute mile. These standard minima apply in the absence of any different minima listed below.

MILITARY USERS NOTE: Civil (nonstandard) take-off minima are published below. For military take-off minima, refer to appropriate service directives.

NAME TAKE-OFF MINIMUMS

BATTLE MOUNTAIN, NV

BATTLE MOUNTAIN

TAKE-OFF MINIMUMS: **Rwy 3**, 2600-2 or std. with a min. climb of 440' per NM to 7500. **Rwy 12**, 3000-2 or std. with a min. climb of 410' per NM to 7900. **Rwy 30**, 3800-2 or std. with a min. climb of 380' per NM to 8800. DEPARTURE PROCEDURE: **Rwys 3, 30**, turn left, climb direct BAM VORTAC. **Rwy 12**, climb runway heading to 5100 turn left direct BAM VORTAC. **Rwy 21**, climb direct BAM VORTAC. **All aircraft** continue climb to 9000 via BAM R-200 within 15 NM then turn right direct BAM VORTAC. Aircraft departing BAM R-001 CW 090° climb on course. All others climb in holding pattern (S, left turns, 020° inbound) to cross BAM VORTAC at or above: R-091 CWR-180 11000; R-181 CWR-360 9500.

BLANDING, UT

BLANDING MUNI

TAKE-OFF MINIMUMS: **Rwy 35**, 800-1 or std. with a min. climb of 350 feet per NM to 6700. DEPARTURE PROCEDURE: **Rwy 17**, turn left. **Rwy 35**, turn right climb to 9000 via heading 090° and DVC R-223 to DVC VORTAC, then continue climb on course to MEA.

NAME TAKE-OFF MINIMUMS

BRIGHAM CITY, UT

BRIGHAM CITY

DEPARTURE PROCEDURE: **Rwy 34**, turn left. **Rwy 16**, turn right. **All aircraft** climb direct BMC NDB then via 189° bearing from BMC NDB and OGD R-281 to OGD VORTAC. V-6 eastbound departures cross OGD VORTAC at or above 10700; if unable continue climb in OGD holding pattern (Hold NW, right turns, 122° inbound) to cross OGD VORTAC at or above 10700 before proceeding on course. All others climb on course to MEA or assigned altitude.

BULLHEAD CITY, AZ

LAUGHLIN/BULLHEAD INTL

TAKE-OFF MINIMUMS: **Rwy 16**, 900-2 or std. with a min. climb of 250' per NM to 1800. **Rwy 34**, 4200-2 or std. with a min. climb of 520' per NM to 5300. DEPARTURE PROCEDURE: **Rwy 34**, climbing right turn. **All aircraft** climb direct EED VORTAC.

CASA GRANDE, AZ

CASA GRANDE MUNI

DEPARTURE PROCEDURE: **Rwy 5**, right turn. **Rwy 23**, climb direct TFD VORTAC. Continue climb in holding pattern (SW, right turn, 048° inbound) to MEA for direction of flight.

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C2

CEDAR CITY, UT

CEDAR CITY REGIONAL

TAKE-OFF MINIMUMS: **Rwy 8**, 3500-3 or std. with a min. climb of 450' per NM to 10000.

DEPARTURE PROCEDURE: **Rwys 20, 26**, turn right. **Rwys 2, 8**, turn left, climb direct to CDC VOR/DME, continue climb to 9000 via R-348. Northbound continue on course. All others reverse course, climb to cross CDC VOR/DME at or above MCA for direction of flight.

CHANDLER, AZ

CHANDLER MUNI

DEPARTURE PROCEDURE: **Rwys 4L, 4R**, climbing left turn heading 220°. **Rwys 22L, 22R** climbing left turn heading 190°. **All aircraft** continue climb via TFD R-350 to TFD VORTAC.

STELLAR AIRPARK

DEPARTURE PROCEDURE: **Rwy 17**, turn left, climb via heading 150°. **Rwy 35**, turn right. **All aircraft** climb via TFD R-350 direct TFD VORTAC.

COLORADO CITY, AZ

COLORADO CITY MUNI

TAKE-OFF MINIMUMS: **Rwy 2**, NA.

DEPARTURE PROCEDURE: **Rwy 11**, turn right. **Rwys 20, 29**, turn left. **All aircraft** climb to 7400 via the 160° bearing from AZC NDB then continue climb on course.

COOLIDGE, AZ

COOLIDGE MUNI

DEPARTURE PROCEDURE: **Rwys 5, 35**, climbing left turn heading 280° to intercept TFD R-063, then via R-063 to TFD VORTAC before proceeding on course. **Rwy 17**, climbing right turn heading 240° to intercept TFD R-090, then via R-090 to TFD VORTAC before proceeding on course. **Rwy 23**, climb runway heading to intercept TFD R-090, then via R-090 to TFD VORTAC before proceeding on course.

DAVIS-MONTHAN AFB (KDMA)

TUCSON, AZ

Diverse departures not authorized, use published departure procedure for obstacle avoidance.
TAKE-OFF OBSTACLES: **Rwy 30**: 2599' MSL (10' AGL) vehicle 200' from departure end of rwy, 400' left of centerline.

DOUGLAS BISBEE, AZ

BISBEE- DOUGLAS INTL

DEPARTURE PROCEDURE: Climb to 5700 in holding pattern, right turn to 140 inbound DUG VORTAC, then assigned route. CAT C, D turbojets climb not to exceed 250 kts. to 8000.

DUCHESNE, UT

DUCHESNE MUNI

DEPARTURE PROCEDURE: Climb direct to MTU VORTAC to depart at or above 7200 eastbound or 10000 westbound.

ELKO, NV

ELKO REGIONAL

TAKE-OFF MINIMUMS: **Rwy 5**, 2500-3 or std. with a min. climb of 330' per NM to 8000. **Rwy 23**, 2500-3 or std. with a min. climb of 340' per NM to 8000.

DEPARTURE PROCEDURE: **Rwy 5**, climb runway heading to 6000, then climbing right turn direct BQU VOR/DME, then...

Rwy 23, (V32 Southwest) climb to 6000, then climbing left turn heading 200° to intercept BQU R-241 (V32).

Rwy 23, all others climb runway heading to 6000, then climbing left turn direct BQU VOR/DME, then... climb in BQU VOR/DME holding pattern (S, left turns, 340° inbound) to cross BQU VOR/DME at the MEA/MCA/MOCA for direction of flight.

ELY, NV

ELY AIRPORT-YELLAND FIELD

TAKE-OFF MINIMUMS: **Rwys 30, 36**, 3000-2 or std. with a min. climb of 700' per NM to 10000.

DEPARTURE PROCEDURE: **Rwys 12, 30, 36**, right turn; **Rwy 18**, straight ahead; intercept. ELY VOR/DME R-150 to 10000. Aircraft departing on V293 southeast climb on course to MEA. Departures V269 or V293 northbound, reverse course to the left, continue climb to cross ELY VOR/DME at or above 12000.

FALLON, NV

FALLON MUNI

TAKE-OFF MINIMUMS: **Rwy 13**, 300-1 or std. with a min. climb of 350' per NM to 4300.

DEPARTURE PROCEDURE: **Rwy 21**, turn right. **Rwys 3, 13, 31**, turn left. All departures climb via HZN R-075 to HZN VORTAC. Climb in holding pattern (W, right turns, 075° inbound) to depart HZN VORTAC at or above: R-240 CWR-149, 8000; R-150 CWR-239, 9000. Continue climb on course to MEA or assigned altitude.

FALLON NAS (KNFL)

FALLON, NV

Diverse departures not authorized.

FLAGSTAFF, AZ

FLAGSTAFF PULLIAM

DEPARTURE PROCEDURE: **Rwy 3**, turn right. **Rwy 21**, turn left. Aircraft departing FLG R-160 CWR-175 climb on course. All others climb southbound on FLG R-172 to 9000, then climbing left turn direct FLG VOR/DME.

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TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES



C2

SW-4



TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

FORT HUACHUCA-SIERRA VISTA, AZ

SIERRA VISTA MUNI-LIBBY AAF

TAKE-OFF MINIMUMS: **Rwy 21**, NA.DEPARTURE PROCEDURE: **Rwys 3, 8, 12**, turn left.**Rwys 26, 30**, turn right. **All aircraft** climb to 9500 to TOMBS Int via FHU VOR R-019 or 018° bearing from DAO NDB.

GLENDALE, AZ

GLENDALE MUNI

TAKE-OFF MINIMUMS: **Rwy 1**, standard.NOTE: (ATC requires a min. climb of 400' per NM to 3000). **Rwy 19**, NA.

DEPARTURE PROCEDURE: Use PODRY RNAV DEPARTURE.

GLOBE, AZ

SAN CARLOS APACHE

TAKE-OFF MINIMUMS: **Rwy 9**, 3400-3 or 300-1 with a min. climb of 250' per NM to 7400 (3289' MSL terrain/ trees 2075' from departure end of runway, 650' right of centerline). **Rwy 27**, 1700-3 or std. with a min. climb of 320' per NM to 5200.DEPARTURE PROCEDURE: **Rwy 9**, use ASEDE RNAV DEPARTURE. **Rwy 27**, use IZTIR RNAV DEPARTURE.

HEBER CITY, UT

HEBER CITY MUNI-RUSS MCDONALD FIELD

TAKE-OFF MINIMUMS: **Rwy 3**, Cat A and B 2200/3 or std. with a min. climb of 636' per NM to 8300. Cat C and D NA. **Rwy 21**, NA-obstacles.

DEPARTURE PROCEDURE: Use ZANGY RNAV DEPARTURE.

HILL AFB (KHIF)

OGDEN, UT

Diverse departures not authorized, use radar vectors or published Departure Procedures (DP) for obstacle avoidance.

HUNTINGTON, UT

HUNTINGTON MUNI

TAKE-OFF MINIMUMS: **Rwys 18, 25, 36**, NA. **Rwy 30**, 1700-3 or std. with a min. climb of 300' per NM to 8100.DEPARTURE PROCEDURE: **Rwys 7, 12**, climbing left turn direct PUC VOR/DME. **Rwy 30**, climbing right turn direct PUC VOR/DME. **All aircraft**, continue climb in PUC VOR/DME holding pattern (hold S, right turns, 009° inbound) to MEA for direction of flight.NOTE: **Rwy 7**, tree 2663' from departure end of runway, 922' left of centerline, 40' AGL/5979' MSL. **Rwy 12**, tree 333' from departure end of runway, 132' right of centerline, 40' AGL/5919' MSL. **Rwy 30**, tree 2065' from departure end of runway, 875' left of centerline, 40' AGL/5999' MSL.

KANAB, UT

KANAB MUNI

TAKE-OFF MINIMUMS: **Rwy 1**, std. with a min. climb of 316' per NM to 7200.

NOTE: Use KACIR ONE RNAV DEPARTURE.

KINGMAN, AZ

KINGMAN

TAKE-OFF MINIMUMS: **Rwys 3, 17, 21, 35**, 800-1 or std. with a min. climb of 210' per NM to 7000.

DEPARTURE PROCEDURE: Climb northbound on IGM R-010 until reaching 6000; reverse course to the left and continue climb to 9000 direct to IGM. If unable to cross IGM at 9000 continue climb in IGM holding pattern (SW, left turns, 027° inbound).

LAGUNA AAF (LGF)

YUMA PROVING GROUND, AZ (03247)

Rwy 6, 18, 36 turn right, climb to 3600 direct BZA VORTAC.**Rwy 24** climb to 3600 direct to BZA VORTAC.

TAKE-OFF OBSTACLES:

Rwy 18: 386' (6' AGL) windsock, 818' from departure end of rwy, 194' left of centerline.

LAKE HAVASU CITY, AZ

LAKE HAVASU CITY

TAKE-OFF MINIMUMS: **Rwy 14**, 2100-2 or std. with a min. climb of 440' per NM to 1500. **Rwy 32**, 1600-2 or std. with a min. climb of 420' per NM to 2000.DEPARTURE PROCEDURE: **Rwy 14**, climbing right turn direct EED VORTAC. **Rwy 32**, climb direct to EED VORTAC. Aircraft departing EED R-140 CW R-010 climb on course. All others continue climb in EED holding pattern (E, right turns, 257° inbound) to cross EED VORTAC at or above 3400.

LAS VEGAS, NV

MCCARRAN INTL (KLAS)

TAKE-OFF MINIMUMS: **Rwy 25R**, 300-2 or std. with a min. climb of 228' per NM to 2700.DEPARTURE PROCEDURE: **Rwys 1L, 1R, 19L, 19R**, climbing right turn direct to BLD VORTAC.**Rwys 7L, 7R**, climb via heading 075° to 3400 then climbing right turn direct to BLD VORTAC.**Rwys 25L, 25R**, climb via heading 255° to 2700 then climbing right turn direct BLD VORTAC.NOTE: **Rwy 1L**, building 3514' from departure end of runway, 893' left of centerline, 174' AGL/2176' MSL. **Rwy 1R**, sign 1331' from departure end of runway, 448' right of centerline, 100' AGL/2120' MSL. **Rwy 19L**, multiple buildings and roads from 1394 to 2921' from departure end of runway, 320 to 1062' right of centerline, 36 to 51' AGL/2236 to 2256' MSL. **Rwy 19R**, multiple signs and antenna from 197 to 2922' from departure end of runway, right and left of centerline, 23 to 63' AGL/2202 to 2249' MSL. **Rwy 25L**, multiple buildings and signs from 1003 to 3677' from departure end of runway, 145 to 1302' left of centerline, 34 to 63' AGL/2183 to 2249' MSL. **Rwy 25R**, light pole 9459' from departure end of runway, 2836' left of centerline, 124' AGL/2457' MSL.

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LAS VEGAS, NV (CON'T)

NORTH LAS VEGAS

TAKE-OFF MINIMUMS: **Rwys 7, 12R**, 1000-2 or std. with a min. climb of 300' per NM to 3400.

Rwys 12L, 30R, NA (NOT AN IFR RUNWAY).

DEPARTURE PROCEDURE: **Rwys 7, 12R**, turn right.

Rwys 25, 30L, turn left. **All aircraft** climb via heading 220° and LAS R-300 to LAS VORTAC, cross LAS VORTAC at 4000. Continue climb direct BLD VORTAC.

NOTE: **Rwys 7, 12R**, power lines ¼ NM east of airport, 75' AGL. **Rwy 12R**, tower 1.83 NM right of departure end of runway, 266' AGL/2367' MSL.

LOGAN, UT

LOGAN-CACHE

TAKE-OFF MINIMUMS: **Rwy 10**, NA-obstacles.

Rwy 17, std. with min. climb of 450' per NM to 8500.

Rwy 28, NA-operational.

DEPARTURE PROCEDURE: Use FELDI RNAV DEPARTURE.

LOVELOCK, NV

DERBY FIELD

TAKE-OFF MINIMUMS: **Rwy 1**, 2300-2 or std. with a min. climb of 300' per NM to 6200. **Rwy 7**, 1100-1 or std. with a min. climb of 250' per NM to 5000. **Rwys 19, 25**, 2300-2 or std. with a min. climb of 260' per NM to 6200.

DEPARTURE PROCEDURE: **Rwy 1**, turn right.

Rwys 7, 19, 25, turn left. Climb direct LLC VORTAC. Aircraft departing 330° CW 359° climb via LLC R-333 direct ROBUD Int; 360° CW 089° climb in holding pattern (NW, left turns, 153° inbound) to depart LLC VORTAC at or above 8500; 090° CW 219° climb on course; 220° CW 329° climb in holding pattern to depart LLC VORTAC at or above 7000. Continue climb on course to MEA or assigned altitude.

LUKE AFB (KLUF)

GLENDALE, AZ AMDT 1 04022

Rwy 3R: Standard with minimum climb of 360'/NM to 4600.

Rwy 3L: Standard with minimum climb of 370'/NM to 4600.

Rwy 21L: Standard with minimum climb of 420'/NM to 4600.

Rwy 21R: Standard with minimum climb of 440'/NM to 4600.

TAKE-OFF OBSTACLES: Rwy 3R: 1114' (10' AGL) road+vehicle, 1090' from departure end of rwy, 762' left of centerline. 1132' (23' AGL) railroad, 1813' from departure end of rwy, 767' left of centerline. Rwy 3L: 1123' (19' AGL) taxiing aircraft, 1221' from departure end of rwy, 782' left of centerline. 1123' (19' AGL) taxiing aircraft, 1408' from departure end of rwy, 609' left of centerline. 1109' (10' AGL) road+vehicle, 441' from departure end of rwy, 419' right of centerline. 1109' (10' AGL) road+vehicle, 760' from departure end of rwy, 406' right of centerline, 1124' (25' AGL) North Rwy Supervisory Unit, 1159' from departure end of rwy, 517' right of centerline. 1114' (15' AGL) weather equipment, 759' from departure end of rwy, 505' right of centerline. Rwy 21L: 1117' (38' AGL) taxiing aircraft, 1428' from departure end of rwy, 774' left of centerline. 1094' (10' AGL) road+vehicle, 689' from departure end of rwy, 590' right of centerline. 1104' (20' AGL) South Rwy Supervisory Unit, 813' from departure end of rwy, 643' right of centerline.

MESA, AZ

FALCON FIELD

TAKE-OFF MINIMUMS: **Rwys 4L, 4R**, 2700-3 or std. with a min. climb of 350' per NM to 4100. **Rwys 22L, 22R**, 2700-3 or std. with a min. climb of 280' per NM to 4100.

DEPARTURE PROCEDURE: **Rwys 4L, 4R**, turn left.

Rwys 22L, 22R turn right. **All aircraft** climb direct SDL NDB then climbing left turn direct PXR VORTAC.

MESQUITE, NV

MESQUITE

TAKE-OFF MINIMUMS: **Rwy 1**, 900-3, or std. with a min. climb of 620' per NM to 2400.

DEPARTURE PROCEDURE: **Rwy 1**, climbing left turn, **Rwy 19**, climbing right turn. **All aircraft** climb direct MMM VORTAC. Aircraft departing MMM R-149 CW R-220 climb on course. All others continue climb via MMM R-196 to 6100 and reverse course to cross MMM VORTAC at or above: R-221 CWR-270 and R-331 CW R-060, 6100; R-271 CWR-330, 7300; R-061 CW R-150, 8300.

MICHAEL AAF (DPG)

DUGWAY PROVING GROUND, UT

..... Rwy 12, 1400-2*

* Standard with a minimum climb rate CAT A/B 250/NM to 7000, CAT C/D/E 360/NM to 9300.

Rwy 12; climb via Rwy heading to 6000 then climbing right turn direct DPG NDB. Aircraft departing Northwest-bound, continue climb direct BVL VORTAC. Rwy 30; Climb via Rwy heading to 6000. Aircraft departing Northwest-bound, continue climb direct BVL VORTAC. All others climbing left turn direct DPG NDB. All aircraft depart DPG NDB at or above 7000. Eastbound aircraft proceed via 075° brg from DPG NDB to Verne Int. Cross Verne at or above MCA Southbound aircraft proceed via 173° brg from DPG NDB and DTA VORTAC R-310 to DTA VORTAC.

MILFORD, UT

MILFORD MUNI

TAKE-OFF MINIMUMS: **Rwy 34**, CAT A,B 1200-2 or std. with a min. climb of 360' per NM to 6500, CAT C,D NA. DEPARTURE PROCEDURE: **Rwy 16**, climb direct MLF VORTAC. **Rwy 34**, climbing left turn direct MLF VORTAC. Aircraft departing MLF R-170 CW R-210 climb on course. All other aircraft continue climb southbound via MLF R-190 to 7600, then climbing right turn to cross MLF VORTAC at or above 9000, then climb on course.

MINDEN, NV

MINDEN-TAHOE

TAKE-OFF MINIMUMS: **Rwys 12,16,30**, NA. **Rwy 34**, 4000-3 or std. with a min. climb of 531' per NM to 8700. DEPARTURE PROCEDURE: **Rwy 34**, use MINDEN RNAV DEPARTURE.

MOAB, UT

CANYONLANDS FIELD

TAKE-OFF MINIMUMS: **Rwy 3**, std. with a min. climb of 320' per NM to 5800. **Rwy 21**, std. with a min. climb of 330' per NM to 5400.

DEPARTURE PROCEDURE: **Rwy 3**, turn left. **Rwy 21**, turn right climb to 6700 via OAB R-293, then climbing right turn direct OAB VOR/DME. Climb in OAB holding pattern (NW, left turns, 113° inbound) to 10000 then proceed on course.

NOTE: **Rwy 3**, tree 4383' from departure end of runway, 1507' right of centerline, 50' AGL/4729' MSL. Road 1749' from departure end of runway, 905' left of centerline, 15' AGL/4635' MSL. Tree 3914' from departure end of runway, 1166' right of centerline, 50' AGL/4690' MSL. Tree 1.25 NM from departure end of runway, 400' right of centerline, 50' AGL/4758' MSL. **Rwy 21**, pole 2026' from departure end of runway, 78' right of centerline, 80' AGL/4625' MSL. Pole 2061' from departure end of runway, 40' right of centerline, 80' AGL/4625' MSL. Pole 2095' from departure end of runway, 857' right of centerline, 80' AGL/4623' MSL. Pole 1980' from departure end of runway, 344' right of centerline, 80' AGL/4602' MSL.

NELLIS AFB (KLSV)

LAS VEGAS, NV

04330

Diverse departure not authorized.

Rwy 3L/R, Rwy 21L/R, 10,200-3* SR-SS

MILITARY: Use published DP, if unable to comply with DP climb gradient file appropriate DP for intended destination and notify clearance delivery and request RADAR Vectors (Climb Gradient of 300' per NM required for RADAR Vectors). If unable to comply with RADAR Vector climb gradient, A/C must depart VFR.

*CIVIL: Use published DP, if unable to comply with DP climb gradient file appropriate DP for intended destination and notify clearance delivery and request RADAR Vectors (Climb Gradient of 330' per NM required for RADAR Vectors). If unable to comply with RADAR Vectors climb gradient, A/C may use published weather minimums or departure VFR.

TAKE-OFF OBSTACLES:

RWY 3L: 1914' MSL (15' AGL) road/vehicle 1639' past DER, 186' left of centerline. 1914' MSL (15' AGL) road/vehicle 1599' past departure end of runway, 271' left of centerline. 1914' MSL (15' AGL) road/vehicle 1321' past departure end of runway, 807' left of centerline. 1950' MSL (81' AGL) possible aircraft on taxiway, 100' left or right of runway edge at departure end of runway.

RWY 3R: 1950' MSL (81' AGL) possible aircraft on taxiway 1344' past departure end of runway, 816 left or right of centerline. 1950' MSL (81' AGL) possible aircraft on taxiway 1344' past departure end of runway, 100 left or right of centerline.

RWY 21L: 1879' MSL (60' AGL) trees 933 past departure end of runway, 719' left of centerline. 1879' MSL (60' AGL) trees 949' past departure end of runway, 621 left of centerline. 2017' MSL (198' AGL) antennas 940' past departure end of runway, 2696' left of centerline. 1900' MSL (81' AGL) possible aircraft on taxiway, 100' left or right of runway edge at departure end of runway.

RWY 21R: 1900' MSL (81' AGL) possible aircraft on taxiway, 100' left or right of runway edge at departure end of runway.

NOGALES, AZ

NOGALES INTL

TAKE-OFF MINIMUMS: **Rwy 3**, 5000-3 or std. with a min. climb of 350' per NM to 8000. **Rwy 21**, 5000-3 or std. with a min. climb of 300' per NM to 8500.

DEPARTURE PROCEDURE: **Rwy 3**, turn left. **Rwy 21**, turn right. All aircraft climb via OLS R-276 and TUS R-176 to cross ARVEY Int at or above 10000. Continue on course to MEA or assigned altitude.

OGDEN, UT

OGDEN-HINCKLEY

TAKE-OFF MINIMUMS: **Rwy 7**, NA. **Rwy 3**, CAT A,B 300-1 or std. with a min climb of 425' per NM to 4800. CAT C,D 3600-3. **Rwy 16**, 300-1½ or std. with a min. climb of 260' per NM to 4800.

DEPARTURE PROCEDURE: **Rwys 3,34**, turn left. **Rwys 16,21,25**, turn right. All aircraft climb direct OGD VORTAC. Aircraft departing OGD R-150 CW R-225 climb on course. All others climb in holding pattern (W, right turns, 101° inbound) to depart OGD VORTAC at or above: R-226 CW R-310, 6000; R-311 CW R-335, 6800; R-336 CW R-149, 10700. Continue on course to MEA or assigned altitude.

TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

PAGE, AZ

PAGE MUNI

TAKE-OFF MINIMUMS: **Rwy 15**, 300-1 or std. with a min. climb of 240' per NM to 6200. **Rwys 7, 25**, NA.
DEPARTURE PROCEDURE: **Rwy 15**, climb to 5000, then climbing right turn to PGA VOR/DME. **Rwy 33**, climb to 5000, then climbing left turn to PGA VOR/DME. Cross PGA VOR/DME at or above 7000. Continue climb in holding pattern (hold NW, right turns 147° inbound) to airway MEA.

PARKER, AZ

AVI SUQUILLA

TAKE-OFF MINIMUMS: **Rwy 1**, 800-1½. **Rwy 19**, 300-1.
DEPARTURE PROCEDURE: **Rwy 19**, right turn. **Rwy 1**, left turn. Climb via R-067 to PKE VORTAC, to cross above 4500. Continue climb on course to MEA or assigned altitude.

PAYSON, AZ

PAYSON

TAKE-OFF MINIMUMS: IFR DEPARTURE NA.

PHOENIX, AZ

PHOENIX-DEER VALLEY

TAKE-OFF MINIMUMS: **Rwy 7L**, 900-2 or std. with a min. climb of 430' per NM to 2300. **Rwy 7R**, 900-2 or std. with a min. climb of 550' per NM to 2100. **Rwy 25L**, 900-2 or std. with a min. climb of 330' per NM to 2500. **Rwy 25R**, 900-2 or std. with a min. climb of 350' per NM to 2500.
DEPARTURE PROCEDURE: **Rwys 7L, 7R**, turn left. **Rwys 25L, 25R**, turn right heading 060°. All aircraft climb northwestbound via PXR R-336. Aircraft departing northwestbound via V105-257 climb on course. All others continue climb to 4000, then climbing left turn direct PXR VORTAC, continue climb on course.

PHOENIX, AZ (CON'T)

PHOENIX SKY HARBOR INTL

TAKE-OFF MINIMUMS: **Rwy 26**, 700-3 or std. with a min. climb of 358' per NM to 2000.

DEPARTURE PROCEDURE: **Rwys 7L, 7R, 8**, climb via 078° heading to 3000, then climbing right turn direct PHOENIX (PXR) VORTAC. **Rwys 25L, 25R**, climb via 258° heading to 1550 then climbing right turn to join the PXR R-260 (V16) westbound, climb to 5000. **Rwy 26**, climb via 258° heading to 1550 then climbing left turn to join the PXR R-260 (V16) westbound, climb to 5000. Westbound departures continue climb on PXR R-260. All others, climbing right turn direct PXR VORTAC.

NOTE: **Rwy 7L**, building 1332' from departure end of runway, 798' left of centerline, 67' AGL/1176' MSL. **Rwy 7R**, rod 716' from departure end of runway, 184' right of centerline, 87' AGL/1196' MSL. **Rwy 8**, light standard 3530' from departure end of runway, 1207' left of centerline, 123' AGL/1232' MSL. Light standard 3479' from departure end of runway, 1003' left of centerline, 118' AGL/1227' MSL. **Rwy 25L**, light standard 1129' from departure end of runway, 774' left of centerline, 91' AGL/1200' MSL. **Rwy 26**, light 59' from departure end of runway, 63' right of centerline, 16' AGL/1125' MSL. Pole 58' from departure end of runway, 90' right of centerline, 25' AGL/1125' MSL. Light 78' from departure end of runway, 64' right of centerline, 18' AGL/1127' MSL. Light 38' from departure end of runway, 440' left of centerline, 24' AGL/1135' MSL. Light standard 77' from departure end of runway, 453' left of centerline, 27' AGL/1136' MSL. Light standard 74' from departure end of runway, 456' right of centerline, 33' AGL/1142' MSL. Light standard 77' from departure end of runway, 434' right of centerline, 31' AGL/1140' MSL. Tree 113' from departure end of runway, 294' right of centerline, 24' AGL/1133' MSL. Building 2.32 NM from departure end of runway, 3309' right of centerline, 406' AGL/1496' MSL. Building 2.28 NM from departure end of runway, 3612' right of centerline, 663' AGL/1750' MSL. Tree 234' from departure end of runway, 214' right of centerline, 24' AGL/1133' MSL. Light standard 64' from departure end of runway, 68' left of centerline, 39' AGL/1125' MSL.

WILLIAMS GATEWAY

TAKE-OFF MINIMUMS: **Rwys 30L, 30C, 30R**, CAT C, D, E 2000-2 or std. with a min. climb of 230' per NM to 3900.

DEPARTURE PROCEDURE: **Rwys 12L, 12C, 12R**, climb to 2500 via IWA R-122 then climbing right turn direct PXR VORTAC. **Rwys 30L, 30C, 30R**, climbing right turn to 4000 via IWA R-122 then climbing right turn direct PXR VORTAC.

PRESCOTT, AZ

ERNEST A. LOVE FIELD

TAKE-OFF MINIMUMS: **Rwy 12**, 2700-2 or std. with a min. climb of 460' per NM to 8100. **Rwy 21L**, 2700-2 or std. with a min. climb of 500' per NM to 8100. **Rwy 30**, 300-1 or std. with a min. climb of 300' per NM to 5200. **Rwy 3L**, **21R**, NA.

DEPARTURE PROCEDURE: **Rwy 3R**, turn left heading 250° to intercept DRK R-305. **Rwy 12**, turn right direct DRK VORTAC. **Rwy 21L**, turn right heading 335° to intercept DRK R-305. **Rwy 30**, climb direct DRK VORTAC. **All aircraft** continue climb via DRK R-305 to 9000. Aircraft departing via DRK R-305 continue climb on course. All other aircraft turn right direct DRK VORTAC then climb on course.

PRICE, UT

CARBON COUNTY

TAKE-OFF MINIMUMS: **Rwy 7**, std. with a min. climb of 350' per NM to 6500. **Rwy 14**, std. with a min. climb of 230' per NM to 8000. **Rwy 18**, std. with a min. climb of 215' per NM to 8000. **Rwy 32**, 900-3 or std. with a min. climb of 410' per NM to 7200. **Rwy 36**, 1900-3 or std. with a min. climb of 465' per NM to 8400.

DEPARTURE PROCEDURE: **Rwy 14**, climbing left turn heading 140°. **Rwys 7, 36**, climbing right turn heading 172°. **Rwys 18, 25, 32**, climbing left turn heading 082°. **All aircraft** climb via PUC VOR/DME R-127 to 8000 within 10 miles of PUC VOR/DME, then climbing right turn via PUC VOR/DME R-164 to PUC VOR/DME. Climb in PUC VOR/DME holding pattern (S, right turns, 009° inbound) to cross PUC VOR/DME at or above MEA for direction of flight, then climb on course.

NOTE: **Rwy 7**, road 280' from departure end of runway, 5' left of centerline, 15' AGL/5905' MSL. Tree 2521' from departure end of runway, 852' left of centerline, 40' AGL/5999' MSL. **Rwy 14**, road 10' from departure end of runway, 307' left of centerline, 15' AGL/5814' MSL. Tree 42' from departure end of runway, 377' left of centerline, 40' AGL/5839' MSL. Tree 56' from departure end of runway, 459' left of centerline, 40' AGL/5829' MSL. Tree 377' from departure end of runway, 27' left of centerline, 40' AGL/5829' MSL. **Rwy 18**, tree 1172' from departure end of runway, 231' left of centerline, 40' AGL/5839' MSL. **Rwy 25**, tree 564' from departure end of runway, 611' right of centerline, 40' AGL/5879' MSL. **Rwy 32**, tree 4757' from departure end of runway, 1760' right of centerline, 40' AGL/5999' MSL. **Rwy 36**, powerline 1200' from departure end of runway, on centerline, 40' AGL/6039' MSL.

PROVO, UT

PROVO MUNI

DEPARTURE PROCEDURE: Use PROVO DEPARTURE.

RENO, NV

RENO/STEAD

TAKE-OFF MINIMUMS: CAT A, B only, CAT C, D NA. **Rwys 8, 14**, 1300-2 or std. with a min. climb of 400' per NM to 6500. **Rwy 26**, 1900-2 or std. with a min. climb of 410' per NM to 7200. **Rwy 32**, 2300-2 or std. with a min. climb of 420' per NM to 7200.

DEPARTURE PROCEDURE: **Rwys 8, 32**, climbing right turn heading 100°. **Rwy 14**, left turn climb direct FMG VORTAC. **Rwy 26**, climbing right turn heading 050° and FMG VORTAC R-314 to FMG VORTAC. **All aircraft** climb in FMG VORTAC holding pattern (NE, right turns, 221° inbound) to depart FMG VORTAC; R-260 CWR-170 at or above 10000; R-171 CWR-195 at or above 10500; R-196 CWR-259 at or above 12000.

RENO/TAHOE INTL

TAKE-OFF MINIMUMS: **Rwy 7**, NA. **Rwy 16R**, CAT A, B, std. with a min. climb of 410' per NM to 9200. CAT C, D std. with a min. climb of 460' per NM to 9200. **Rwy 16L**, std. with a min. climb of 740' per NM to 8000. **Rwy 25**, CAT A, B, std. with a min. climb of 380' per NM to 8000. CAT C, D, std. with a min. climb of 610' per NM to 9800. **Rwys 34L/R**, std. with a min. climb of 440' per NM to 7400.

DEPARTURE PROCEDURE: **Rwy 16L**, climb runway heading to 6600, then climbing left turn direct FMG VORTAC. **Rwy 16R**, climb via I-RNO south course or runway heading to 6600, then climbing left turn direct FMG VORTAC. **Rwy 25**, climb runway heading to 5000, then climbing right turn direct FMG VORTAC.

Rwys 34L/R, Climb via I-RNO north course or runway heading to 7500, then climbing right turn direct FMG VORTAC. **All aircraft** climb in FMG VORTAC holding pattern (NE, left turns, 221° inbound) to depart FMG VORTAC at or above MEA/MCA for direction of flight.

NOTE: All Runways, cross departure end of runway at or above 35 AGL. **Rwy 16L**, tower 6056' from departure end of runway, 2403' left of centerline, 16' AGL/5027' MSL. **Rwy 16R**, terrain 7638' from departure end of runway, 2348' left of centerline, 4703' MSL. **Rwy 25**, numerous trees/buildings within 6600' from departure end of runway, left and right of centerline. **Rwy 34L**, building 7104' from departure end of runway, 2429' right of centerline, 363' AGL/4780' MSL. **Rwy 34R**, building 7104' from departure end of runway, 1728' right of centerline, 363 AGL/4780' MSL.

RICHFIELD, UT

RICHFIELD MUNI

TAKE-OFF MINIMUMS: **Rwy 1**, 300-1½ or std. with a min. climb of 360' per NM to 13,500. **Rwy 19**, standard with a min. climb of 450' per NM to 14,500.

DEPARTURE PROCEDURE: **Rwy 1**, use EBOVE DEPARTURE. **Rwy 19**, use HAMET DEPARTURE.

NOTE: **Rwy 1**, tower 7372' from departure end of runway, 1863' right of centerline, 286' AGL/5556' MSL.



TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES



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ROOSEVELT, UT

ROOSEVELT MUNI

TAKE-OFF MINIMUMS: **Rwy 25**, 700-3 or std. with a min. climb of 300' per NM to 6100.

DEPARTURE PROCEDURE: **Rwy 7**, turn right.

Rwy 25, turn left. **All aircraft**, climb direct MTU VORTAC. Aircraft departing MTU VORTAC R-040 CW R-150, climb on course. All others continue climb in MTU holding pattern (NE, right turns, 213° inbound) to cross MTU VORTAC; R-151 CW R-290 at or above 8000; R-291 CW R-039 at or above 10,000. Then climb on course.

SAFFORD, AZ

SAFFORD REGIONAL

TAKE-OFF MINIMUMS: IFR departure not authorized.

ST. GEORGE, UT

ST. GEORGE MUNI

TAKE-OFF MINIMUMS: **Rwy 34**, 1500-2 or std. with a min. climb of 325' per NM to 4000.

DEPARTURE PROCEDURE: **Rwy 16**, turn left. **Rwy 34**, turn right. Climb in OZN VOR/DME holding pattern (hold SE, right turns, 296 inbound) to depart OZN VOR/DME at or above MEA for direction of flight.

ST. JOHNS, AZ

ST. JOHNS INDUSTRIAL AIR PARK

TAKE-OFF MINIMUMS: **Rwy 21**, 400-2 or std. with a min. climb of 205' per NM to 6200.

DEPARTURE PROCEDURE: **Rwys 3, 32**, climbing right turn, **Rwys 14, 21**, climbing left turn; **all aircraft** climb direct SJN VORTAC. Aircraft departing SJN VORTAC R-240 CW R-080 climb on course. All others continue climb in SJN VORTAC holding pattern (Hold SW, right turns, 059° inbound) to cross SJN VORTAC at or above 8400.

NOTE: **Rwy 14**, 5790' tower 350' right abeam departure end of runway.

SALT LAKE CITY, UT

SALT LAKE CITY INTL

TAKE-OFF MINIMUMS: **Rwy 14**, not authorized.

Rwys 16L, 17: aircraft assigned heading 160° std., assigned heading 280° CW through 340° std. with a min. climb of 400' per NM to 10,000. **Rwy 16R**, aircraft assigned heading 160° std., assigned heading 280 CW through 340° std. with a min. climb of 410' per NM to 10,000. **Rwy 32**, 400-1 or std. with a min. climb of 450' per NM to 7500.

NOTE: 4549' MSL tower, 5260' from departure end of runway, 1760' left of extended runway centerline.

Rwys 34L/R, 35, aircraft assigned heading 260° CW through 319° std. with a min. climb of 260' per NM to 7500; assigned heading 320° CW through 340° std. with a min. climb of 340' per NM to 7500 (ATC). Use SALT LAKE DEPARTURE.

SALT LAKE CITY, UT (CON'T)

SALT LAKE CITY MUNI 2

TAKE-OFF MINIMUMS: **Rwy 16**, 2400-3 or std. with a min. climb of 295' per NM to 7700. **Rwy 34**, std. with a min. climb of 353' per NM to 9500.

DEPARTURE PROCEDURE: **Rwy 16**, climbing left turn to 9600 via heading 136° and V21 (TCH R-161/FFU R-341) to FFU VORTAC. Aircraft departing FFU R-156 CW R-263 and R-308 CW R-359 climb on course. All others continue climb in FFU VORTAC holding pattern (S, right turns, 008° inbound) to cross FFU VORTAC at or above: R-360 CW R-093 12400; R-094 CW R-138 10600; R-139 CW R-155 11300; R-264 CW R-307 11500. **Rwy 34**, climbing right turn to 9500 via heading 026° and V21 (TCH R-161) to TCH VORTAC. Aircraft departing TCH R-144 CW R-176 and R-217 CW R-355 climb on course. All others continue climb in TCH VORTAC holding pattern (NW, right turns, 116° inbound) to cross TCH VORTAC at or above: R-356 CW R-116 10700; R-117 CW R-143 11600; R-177 CW R-216 10100.

SCOTTSDALE, AZ

SCOTTSDALE

TAKE-OFF MINIMUMS: **Rwy 3**, Categories A, B, 1400-2 or std. with a min. climb of 410' per NM to 3100. Category C, 2100-2 or std. with a min. climb of 410' per NM to 3700. **Rwy 21**, Category C, 900-2 or std. with a min. climb of 230' per NM to 2600.

DEPARTURE PROCEDURE: **Rwy 3**, turn left heading 260°. **Rwy 21**, turn right heading 300°; **all aircraft** climb NW-bound via PXR R-336. Aircraft departing NW-bound via V105-257 climb on course. R-311 CW R-335, 6800; R-336 CW R-149, 10700. Continue on course to MEA or assigned altitude. All others continue climb to 4000, then climbing left turn direct PXR VORTAC; continue climb on course.

SEDONA, AZ

SEDONA

TAKE-OFF MINIMUMS: **Rwy 3**, NA. **Rwy 21**, standard (DRAKE transition requires a minimum climb of 230' per NM from TAKE-OFF to 9000).

DEPARTURE PROCEDURE: **Rwy 21**, use LYRIT RNAV DEPARTURE.

SHOW LOW, AZ

SHOW LOW REGIONAL

DEPARTURE PROCEDURE: **Rwys 3, 6**, turn left.

Rwys 21, 24, turn right. All aircraft climb via 345 bearing from SOW NDB to DEHOG INT then climb on course.

SPRINGERVILLE, AZ

TOWN OF SPRINGERVILLE MUNI

TAKE-OFF MINIMUMS: **Rwy 21**, 1000-2 or std. with a min. climb of 360' per NM to 8400.

DEPARTURE PROCEDURE: **Rwys 3, 11**, climbing left turn to 8400 via heading 360° before proceeding on course. **Rwys 21, 29**, climbing right turn to 8400 via 360° before proceeding on course.

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TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES



SW-4

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TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

TAYLOR, AZ

TAYLOR MUNI

TAKE-OFF MINIMUMS: **Rwy 21**, 300-1 or std. with a min. climb of 248' per NM to 6100.

DEPARTURE PROCEDURE: **Rwy 3/21**, climb on runway heading to 8000 before turning on course.

TONOPAH, NV

TONOPAH

TAKE-OFF MINIMUMS: **Rwys 11,29**, NA. **Rwys 15,33**, 2600-2 or std. with a min. climb of 260' per NM to 8000.

DEPARTURE PROCEDURE: **Rwy 15**, turn left. **Rwy 33**, turn right. Climb direct TPH VORTAC. Continue climb in holding pattern (NE, right turns, 246° inbound) to depart TPH VORTAC at or above 8000. Climb on course to MEA or assigned altitude.

TOOELE, UT

BOLINDER FIELD-TOOELE VALLEY

TAKE-OFF MINIMUMS: **Rwy 17**, std. with a min. climb of 490' per NM to 11000. **Rwy 35**, std. with a min. climb of 360' per NM to 9000.

DEPARTURE PROCEDURE: Use STACO DEPARTURE.

NOTE: **Rwy 17**, tree 794' from departure end of runway, 277' right of centerline, 35' AGL/4380' MSL. Tree 967' from departure end of runway, 432' right of centerline, 35' AGL/4394' MSL. Tree 1023' from departure end of runway, 313' right of centerline, 35' AGL/4395' MSL.

TUCSON, AZ

RYAN FIELD

DEPARTURE PROCEDURE: **Rwy 6R**, turn right; **Rwy 24L**, turn left direct to Ryan NDB. Continue climb in holding pattern (W, right turn 090° inbound) to 5000 before proceeding on course.

TUCSON INTL

DEPARTURE PROCEDURE: **Rwys 3,29L,29R**, climbing right turn direct to TUS VORTAC. **Rwy 21**, climbing left turn direct to TUS VORTAC.

Rwys 11L,11R climb via runway heading to 4000 then climbing left turn direct TUS VORTAC. **All aircraft** continue climbing in holding pattern (NW, right turns, 128° inbound) to depart TUS VORTAC at or above 9000.

VERNAL, UT

VERNAL

TAKE-OFF MINIMUMS: **Rwy 16**, 1500-2 or std with a min. climb of 250' per NM to 7000'. **Rwy 25**, 1500-2 or std. with a min. climb of 390' per NM to 7000. **Rwy 34**, 1600-2 pr std. with a min. climb of 330' per NM to 7000'.

DEPARTURE PROCEDURE: **Rwys 7,34**, turn right. **Rwys 16,25**, turn left. **All aircraft** climb direct VEL. Aircraft departing V391 S-bound climb on course. All others climb in holding pattern (SE, right turns, 322° inbound). Aircraft SW-bound V208 depart VEL at or above 8400', all others depart VEL at or above 9500'. Continue climb on course to MEA or assigned altitude.

WENDOVER, UT

WENDOVER

TAKE-OFF MINIMUMS: **Rwy 26**, standard with a min. climb of 300' per NM to 7000. **Rwy 30**, NA.

DEPARTURE PROCEDURE: **Rwys 8,12,26**, climbing left turn direct BVL VORTAC. Aircraft departing BVL VORTAC R-330 CW R-150 climb on course. All others continue climb in BVL VORTAC holding pattern (Hold NE right turns, 247° inbound) to cross at or above 7400, then climb on course.

WILLCOX, AZ

COCHISE COUNTY

DEPARTURE PROCEDURE: **Rwy 3**, turn right. **Rwy 21**, turn left. **All aircraft** climb direct CIE VORTAC.

WINDOW ROCK, AZ

WINDOW ROCK

TAKE-OFF MINIMUMS: **Rwy 2**, 700-2 or std. with a min. climb of 500' per NM to 8000. **Rwy 20**, 600-2 or std. with a min. climb of 260' per NM to 8200.

DEPARTURE PROCEDURE: **Rwy 2**, turn right. **Rwy 20**, turn left direct to GUP VORTAC before proceeding on course.

NOTE: **Rwy 2**, terrain 3832' from departure end of runway, 1025' right of centerline, 6926' MSL. Poles 5220' from departure end of runway, 245' right of centerline, 180' AGL/6922' MSL. Tower 7067' from departure end of runway, 3072' left of centerline, 71' AGL/7316' MSL. Terrain 7449' from departure end of runway, 1612' left of centerline, 6991' MSL. Terrain 8776' from departure end of runway, 1851' left of centerline, 7109' MSL. Tree 9665' from departure end of runway, 1326' right of centerline, 7340' MSL. Tree 11326' from departure end of runway, 355' left of centerline, 7351' MSL. **Rwy 20**, trees 1018' from departure end of runway, 620' left of centerline, 30' AGL/6768' MSL.

WINNEMUCCA, NV

WINNEMUCCA MUNI

TAKE-OFF MINIMUMS: **Rwy 2**, 2500-2 or std. with a min. climb of 450' per NM to 6800. **Rwys 14,20**, 3200-2 or std. with a min. climb of 520' per NM to 7500.

DEPARTURE PROCEDURE: **Rwys 14,20**, turn right. **Rwy 2**, turn left. **Rwy 32**, climb straight ahead. All aircraft climb via INA R-326 to 6700 or above within 12 NM, then climbing left turn return to INA VOR/DME via R-326. Continue climb in INA VOR/DME holding pattern (hold NW, right turns, 146° inbound) to depart INA VOR/DME at or above 11000. Southbound aircraft continue via INA R-146 direct Fesko Int. Northbound aircraft continue via INA R-326 and SDO R-144 direct SDO VORTAC.

YUMA, AZ

YUMA MCAS/YUMA INTL

DEPARTURE PROCEDURE: Climb direct BZA VORTAC, then climb on course.

TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES